Complete Summary

GUIDELINE TITLE

Screening for HIV in health care settings: a guidance statement for the American College of Physicians and HIV Medicine Association.

BIBLIOGRAPHIC SOURCE(S)

Qaseem A, Snow V, Shekelle P, Hopkins R Jr, Owens DK, Clinical Efficacy Assessment Subcommittee, American College of Physicians. Screening for HIV in health care settings: a guidance statement from the American College of Physicians and HIV Medicine Association. Ann Intern Med 2009 Jan 20;150(2):125-31. PubMed

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE
METHODOLOGY - including Rating Scheme and Cost Analysis
RECOMMENDATIONS
EVIDENCE SUPPORTING THE RECOMMENDATIONS
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
QUALIFYING STATEMENTS
IMPLEMENTATION OF THE GUIDELINE
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES
IDENTIFYING INFORMATION AND AVAILABILITY
DISCLAIMER

SCOPE

DISEASE/CONDITION(S)

Human immunodeficiency virus (HIV)

GUIDELINE CATEGORY

Screening

CLINICAL SPECIALTY

Family Practice
Infectious Diseases

Internal Medicine
Obstetrics and Gynecology
Pediatrics

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To present the available evidence to internists and other primary care clinicians to guide their decisions of screening for human immunodeficiency virus (HIV) in health care settings

TARGET POPULATION

All adult and adolescent (age >13 years) patients seen in health care settings

INTERVENTIONS AND PRACTICES CONSIDERED

Human immunodeficiency virus (HIV) screening

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Note: This guidance statement is derived from an evaluation of the guidelines in the United States on screening for human immunodeficiency virus (HIV) developed by the U.S. Preventive Services Task Force (USPSTF) and the Centers for Disease Control and Prevention (CDC).

The American College of Physicians (ACP) Clinical Efficacy Assessment Subcommittee (CEAS) began by searching the National Guideline Clearinghouse for guidelines on HIV. They reviewed the titles and abstracts of each document. Most of these guidelines did not address screening for HIV. Guidelines that were simply restating guidelines from other organizations were also excluded. The CEAS identified 2 guidelines from American College of Obstetricians and

Gynecologists, which recommended universal screening in women between 19 and 64 years of age. These guidelines were not included in the review because they did not explicitly review the evidence. The CEAS selected the 2 major guidelines on screening for HIV developed in the United States: guidelines from the USPSTF and the CDC.

NUMBER OF SOURCE DOCUMENTS

Two guidelines and five cost-effectiveness studies were reviewed.

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Authors searched the National Guideline Clearinghouse to identify guidelines on screening for human immunodeficiency virus (HIV) in the United States and used the AGREE (Appraisal of Guidelines Research and Evaluation) instrument to evaluate guidelines from the U.S. Preventive Services Task Force and the Centers for Disease Control and Prevention. Readers are referred to the original guideline document for more information on the use of these instruments.

Guideline Selection Criteria

Primary Criterion

- There is an explicit link between the recommendations and the supporting evidence (AGREE instrument Q12).

Secondary Criteria

- Systematic methods were used to search for evidence (AGREE instrument Q8).
- The criteria for selecting the evidence are clearly described (AGREE instrument Q9).
- The methods used for formulating the recommendations are clearly described (AGREE instrument Q10).
- The recommendations are specific and unambiguous (AGREE instrument Q15).
- The guideline has been externally reviewed by experts prior to its publication (AGREE instrument Q13).
- There are explicit quality criteria used to grade the evidence and recommendations (CEAS criteria).
- The quality criteria used by the authors to grade the evidence and recommendations are satisfactory (CEAS criteria).
- There is no identifiable bias that might have influenced the selection of evidence (CEAS criteria).
- The methods used to combine the results from the relevant literature are clearly described and reported (CEAS criteria).

- The authors used satisfactory meta-analytic techniques in the evidence review (CEAS criteria).

Tertiary Criterion

- Meets all criteria, in particular, good methods and good evidence (CEAS criteria).

AGREE = Appraisal of Guidelines Research and Evaluation; CEAS = Clinical Efficacy Assessment Subcommittee; Q = question.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

The authors followed the AGREE (Appraisal of Guidelines Research and Evaluation) Collaboration method to produce this report. The AGREE appraisal instrument asks 23 questions in 6 domains: scope and purpose; stakeholder involvement; rigor of development; clarity and presentation; applicability; and editorial independence. Each guideline is scored in each domain. Before conducting the evaluation, the authors agreed on a method of stratifying the ratings into 3 main categories, outlined in the "Rating Scheme for the Strength of the Evidence" field above. The authors did not weight scores according to these 3 categories, but note their findings in the overall qualitative assessment of the guidelines as discussed. Specifically, the authors viewed a lack of an explicit link between evidence and recommendations as a major flaw that makes it difficult to determine whether the guideline recommendations are valid. A second tier of criteria included whether there was a systematic search and explicit criteria for selecting evidence and whether methods for formulating recommendations were described. The remaining AGREE criteria were considered as part of the overall score.

These guidelines were reviewed independently by 4 co-authors using the AGREE method, with a focus on the 3 major categories that the guiding committee viewed as important. Each guideline was scored, and scores were compared (Table 2 in the original guideline document). Although total quantitative scores varied somewhat, the qualitative assessment of guideline quality was consistent among the 4 reviewers; indeed, the overall rankings of the quality of the guidelines were similar.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus
Informal Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

Several good-quality studies of the cost-effectiveness of human immunodeficiency virus (HIV) screening have been published. A key variation among these studies is whether they consider preventing transmission of infection to others as one of the calculated benefits. One good-quality study showed that early identification and treatment resulted in an increase in life expectancy of 1.52 years in an HIV-infected patient, with a decreased benefit in older patients. The study suggests that a one-time screening program would reduce lifetime numbers of transmission from an average of 1.12 to 0.95, 0.35, and 0.12 partners among men who have sex with men, heterosexual men, and heterosexual women, respectively. The study found that screening was cost-effective (with a cost-effectiveness ratio of $50,000 per quality-adjusted life-year [QALY] gained), even at a prevalence as low as 0.05%. A study of the cost-effectiveness of screening among inpatients found that screening would be cost-effective at a prevalence of 0.1%. Another study that also did not include benefit from reduced transmission showed that the incremental cost-effectiveness of one-time screening was $36,000 per QALY gained in a high-risk population with a prevalence of 3.0%, $38,000 per QALY gained in a population with a prevalence of 1%, and $113,000 per QALY gained in the general U.S. population with a prevalence of 0.1%. More recent analyses that included the benefit from reduced transmission indicated that screening could be cost-effective at a prevalence as low as 0.2%, depending on the extent to which transmission is reduced. A study of targeted versus routine screening concluded that targeted screening could prevent more HIV infections if accompanied by pre- and posttest counseling. The study, however, assumed that high-risk patients could be identified at no cost, an assumption that is at odds with the evidence that many high-risk individuals are not identified through targeted screening. Finally, a cost-effectiveness analysis of screening older patients found that screening would cost less than $60,000 per QALY gained in patients age 65 to 75 years at a prevalence of 0.1%, if patients had a sexual partner at risk and streamlined counseling was used. In summary, these cost-effectiveness analyses provide good evidence that screening for HIV is cost-effective, even when prevalence is low, in the range of 0.1% to 0.2%.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Approved by the American College of Physicians (ACP) Board of Regents on 25 October 2008.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Guidance Statement 1*: American College of Physicians (ACP) recommends that clinicians adopt routine screening for human immunodeficiency virus (HIV) and encourage patients to be tested.*

The goal of screening for HIV is to identify patients with undiagnosed HIV so that timely treatment is provided and transmission is prevented. The ACP's guidance to perform routine screening of all patients is based on the following rationale and evidence. First, early identification and treatment for HIV provides substantial health benefit by extending the length of life of the person identified as having HIV. Modeling studies suggest that identification and successful treatment also probably reduce HIV transmission, both through changes in risk behavior and from suppression of viral load through treatment, although the magnitude of the risk reduction has not been assessed directly.

Second, risk-based screening has failed to identify a substantial proportion of people with HIV early in disease. Although risk-based screening has been recommended for more than 15 years, evidence from the Centers for Disease Control and Prevention (CDC) and Veterans Affairs indicate that almost half of patient are identified late in the course of disease, when they will no longer receive the maximum benefit from antiretroviral therapy. Thus, the effectiveness of risk-based screening has been limited because providers seldom actually perform risk assessments, and even if providers did such assessments in all patients, a substantial proportion of people with HIV would still be missed because they either are unaware that they are at increased risk or do not wish to disclose risk behaviors.

Third, routine opt-out screening (screening all individuals unless they decline to be tested) has been widely implemented and highly successful for prenatal HIV screening. Acceptance among women has been high, and mother-to-child transmission has been nearly eliminated in the United States. Whether specific informed consent for HIV testing is required varies by state, and clinicians should be aware of requirements in their practice setting.

Finally, strong evidence indicates that screening is cost-effective, even when the prevalence of HIV is low.

The ACP encourages clinicians to counsel patients to reduce risky behaviors when such counseling is feasible.

The Clinical Efficacy Assessment Subcommittee (CEAS) recognizes that further evidence on several aspects of routine screening would be useful. These include the degree to which patients will participate in screening, the effectiveness of routine screening in reducing risky behaviors in low-risk settings, and the prevalence of undiagnosed HIV infection in diverse patient populations. Nonetheless, risk-based screening has failed to identify a substantial proportion of people with HIV and, even if implemented universally, would still miss a substantial proportion of people with HIV. The CEAS judged that the benefits of routine screening outweighed the harms and that routine screening is therefore warranted. Several aspects of screening deserve particular emphasis.

High-Risk Patients

The CEAS notes the importance of screening patients who are at increased risk for HIV infection. Many, perhaps most, patients at high risk have not been tested, so efforts to reach these patients are especially important. Groups at increased risk include men who have sex with men; men and women who have unprotected sex with multiple partners; past or current injection drug users; men and women who exchange sex for money or drugs or have sexual partners who do; individuals whose past or current sexual partners were infected with HIV, were bisexual, or were injection drug users; persons being treated for sexually transmitted diseases (STDs); and persons with a history of blood transfusion between 1978 and 1985. Patients who receive health care in high-prevalence or high-risk health care settings are also a high priority for screening. High-risk settings include STD clinics, correctional facilities, homeless shelters, tuberculosis clinics, clinics serving men who have sex with men, substance abuse clinics, and adolescent health clinics with a high prevalence of STDs. High-risk patients who are tested because of a viral syndrome that may represent acute HIV infection may require additional testing in addition to HIV antibody tests, because anti-HIV antibody tests may not be reactive during acute infection.

Pregnancy

The CEAS also notes the importance of screening women who are pregnant. The United States Preventative Services Task Force (USPSTF), Centers for Disease Control and Prevention (CDC), and American College of Obstetricians and Gynecologists guidelines recommend HIV screening during pregnancy. Screening should be performed during each pregnancy.

Age

The CDC recommends that patients age 13 to 64 years be screened for HIV. Less evidence is available on screening older patients, but nationally, approximately 20% of patients with HIV are older than 50 years.

Prevalence of HIV

The CDC recommends routine screening unless the prevalence of HIV in a population is less than 0.1%. This threshold is reasonable given the evidence from cost-effectiveness analyses. The CEAS recognizes that the prevalence of HIV is not known in most populations. A practical approach to routine screening is to begin screening and if no patients with undiagnosed disease are found after a substantial number of patients have been tested, then the need for screening should be reassessed. If no HIV-infected patients are found after screening approximately 4000 patients, the 95% confidence interval (CI) for prevalence will be less than 0.1%.

Education About Risk Factors

Clinicians should discuss the risk factors of HIV infection with their patients. Adolescents and older patients in particular may be unaware of behaviors that may put them at increased risk for HIV.

Rapid Versus Traditional Testing

Traditional testing (enzyme immunoassay followed by Western blot) has very high sensitivity and specificity, so false-positive results are rare. However, results from traditional testing are not rapidly available. Rapid tests provide results within 1 hour, an important advantage that increases the number of patients who receive their result. However, a recently published study found relatively high false-positive rates with an oral rapid test; other reports have noted increased false-positive rates with oral rapid tests. Patients and clinicians should be aware that any positive rapid test result must be confirmed with traditional testing.

Guidance Statement 2*: ACP recommends that clinicians determine the need for repeat screening on an individual basis.*

The importance of repeated HIV screening depends on whether patients have ongoing risk for HIV infection. Higher-risk patients should be retested more frequently than lower-risk patients. The USPSTF does not make recommendations about the frequency of screening. The CDC guideline recommends that providers screen patients at high risk for HIV at least annually. The CDC defines persons likely to be at high risk as injection drug users and their sexual partners, persons who exchange sex for money or drugs, sexual partners of HIV-infected persons, men who have sex with men, and heterosexual persons who have had or whose sexual partners have had more than 1 sexual partner since their most recent HIV test.

Apart from high-risk groups, the decision to retest persons should be based on clinical judgment.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

This guidance statement is derived from other organizations' guidelines and is based on an evaluation of strengths and weaknesses of the available guidelines.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Early identification and treatment of human immunodeficiency virus (HIV)

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

Guidance statements are "guides" only and may not apply to all patients and all clinical situations. Thus, they are not intended to override clinicians' judgment.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Patient Resources
Personal Digital Assistant (PDA) Downloads
Staff Training/Competency Material

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Qaseem A, Snow V, Shekelle P, Hopkins R Jr, Owens DK, Clinical Efficacy Assessment Subcommittee, American College of Physicians. Screening for HIV in health care settings: a guidance statement from the American College of Physicians and HIV Medicine Association. Ann Intern Med 2009 Jan 20;150(2):125-31. PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2008 Dec

GUIDELINE DEVELOPER(S)

American College of Physicians - Medical Specialty Society
HIV Medicine Association - Disease Specific Society

SOURCE(S) OF FUNDING

American College of Physicians

GUIDELINE COMMITTEE

Clinical Efficacy Assessment Subcommittee of the American College of Physicians

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Authors: Amir Qaseem, MD, PhD, MHA; Vincenza Snow, MD; Paul Shekelle, MD; Robert Hopkins Jr., MD; and Douglas K. Owens, MD, MS

Clinical Efficacy Assessment Subcommittee of the American College of Physicians (ACP): Douglas K. Owens, MD, MS (*Chair*); Donald E. Casey Jr., MD, MPH, MBA; Paul Dallas, MD; Thomas D. Denberg, MD, PhD; Mary Ann Forciea, MD; Robert H. Hopkins Jr., MD; William Rodriguez-Cintron, MD; Paul Shekelle, MD, PhD; Donna Sweet, MD

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Grants received: V. Snow (Novo Nordisk, Centers for Disease Control and Prevention, Atlantic Philanthropies, United Healthcare Foundation); D.K. Owens (Department of Veterans Affairs, National Institutes of Health).

Any financial or nonfinancial conflict of interest of the group members was declared, discussed, and resolved.

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available from the American College of Physicians (ACP) Web site.

Print copies: Available from the American College of Physicians (ACP), 190 N. Independence Mall West, Philadelphia PA 19106-1572.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Screening for HIV infection in health care settings: a guidance statement from the American College of Physicians and HIV Medicine Association. Continuing medical education (CME) course. Available from Annals of Internal Medicine Web site.

A collection of Recommendation Summaries for all current American College of Physicians clinical guidelines is available for Personal Digital Assistant (PDA) download from the American College of Physicians Web site.

PATIENT RESOURCES

The following is available:

- Screening for HIV infection in health care settings: a guidance statement from the American College of Physicians and HIV Medicine Association. Ann Intern Med 2009 Jan 20; 150(2):I-44

Electronic copies: Available from the Annals of Internal Medicine Web site.

Print copies: Available from the American College of Physicians (ACP), 190 N. Independence Mall West, Philadelphia PA 19106-1572.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This NGC summary was completed by ECRI Institute on March 16, 2009. The information was verified by the guideline developer on March 24, 2009.

COPYRIGHT STATEMENT

DISCLAIMER

NGC DISCLAIMER

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public

or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at http://www.guideline.gov/about/inclusion.aspx .

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

Date Modified: 4/6/2009